

# Common Core – Math 7

## Expressions and Equations

Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

### 7.EE.4

Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

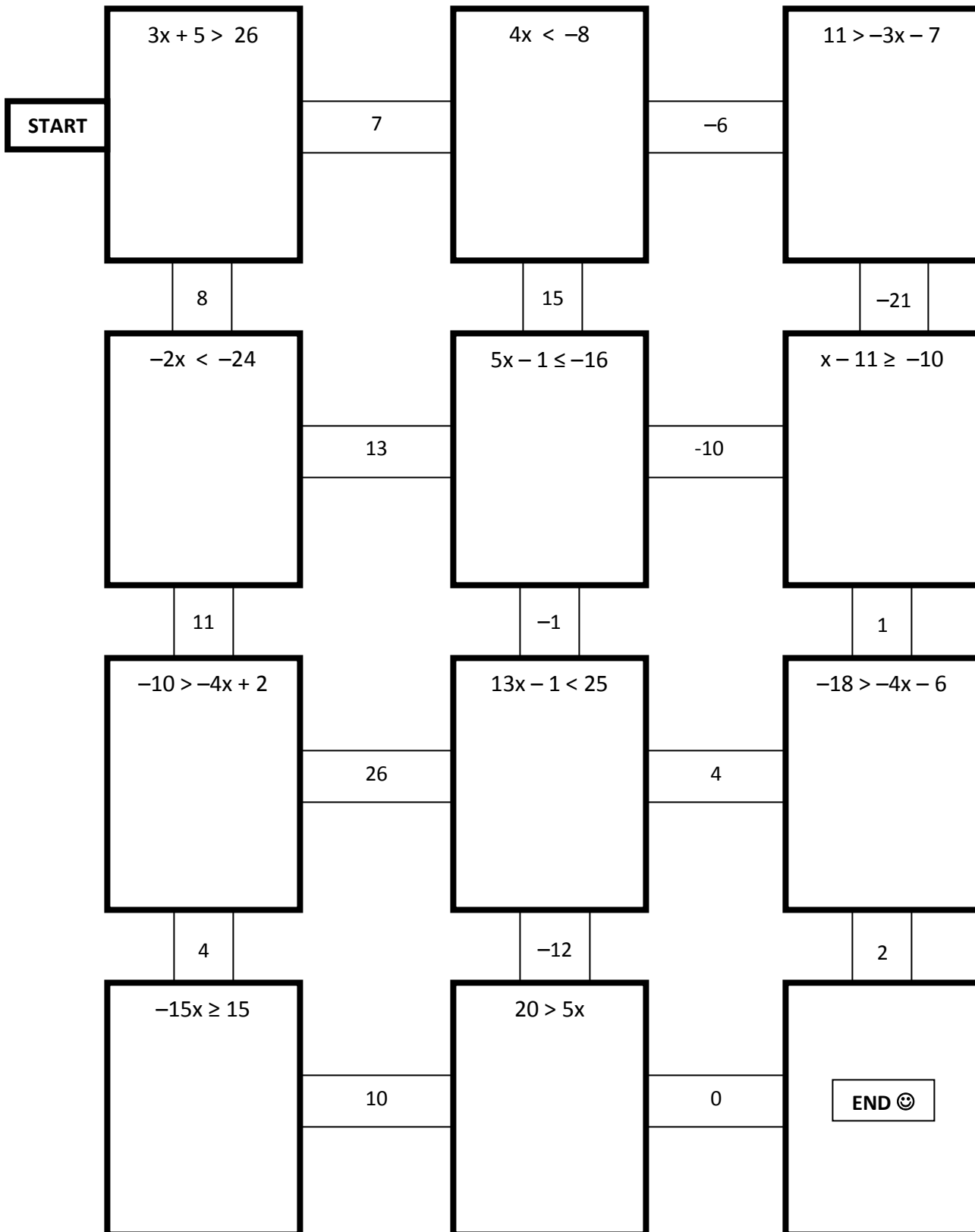
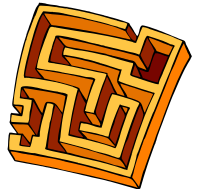
- a. Solve word problems leading to equations of the form  $px + q = r$  and  $p(x + q) = r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*
- b. Solve word problems leading to inequalities of the form  $px + q > r$  or  $px + q < r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.*

Name \_\_\_\_\_

Date \_\_\_\_\_

**Directions:** To begin, solve the inequality located at START. To move on to the next inequality box, the number in the path MUST be a **solution** to the previous inequality solved. Solve only the inequalities required to navigate through the puzzle. Use arrows to show the path you took. When you have reached END, you have completed the maze! Good luck!

(Hint: You should solve a total of 7 inequalities.)



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